

**EFFECTIVENESS OF A GRATITUDE-BASED
INTERVENTION IN INCREASING SUBJECTIVE
WELL-BEING OF MOTHERS WITH DOWN
SYNDROME CHILDREN**

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SYNDROME CHILDREN**

by

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
ATR	Automatic thoughts record
BPS	Best-possible-selves
GAC	Gratitude Adjectives Checklist
GRAT	Gratitude, Resentment, and Appreciation Test
GQ-6	The Gratitude Questionnaire-Six Item Form
JEPeM	Human Research Ethics Committee
LOCF	Last observation carried forward
PANAS-X	Positive and Negative Affect Schedule
PPI	Positive Psychology Intervention
SHS	Subjective Happiness Scale
SWB	Subjective Well-being
SwLS	Satisfaction with Life Scale
USM	Universiti Sains Malaysia
VIA	Values in Action

**KEBERKESANAN INTERVENSI BERASASKAN RASA BERSYUKUR
DALAM MENINGKATKAN KESEJAHTERAAN SUBJEKTIF IBU DENGAN
ANAK YANG ADA SINDROM DOWN**

ABSTRAK

Bidang psikologi positif sedang mengalami perkembangan pesat dengan peningkatan jumlah intervensi yang berfokus untuk meningkatkan kebahagiaan dan kesejahteraan orang ramai. Intervensi berasaskan rasa bersyukur telah didapati sebagai salah satu intervensi yang berkesan dalam banyak kajian. Kajian yang dijalankan secara atas talian ini mengkaji keberkesanan intervensi 4 minggu menggunakan senarai rasa syukur untuk meningkatkan tahap rasa bersyukur dan kesejahteraan subjektif dalam kalangan sampel ibu di Malaysia yang ada anak dengan Sindrom Down ($N = 63$). Peserta dibahagikan kepada kumpulan kawalan dan kumpulan eksperimental. Kumpulan eksperimental melalui intervensi berasaskan rasa bersyukur di mana peserta kajian melaporkan perkara yang menimbulkan rasa bersyukur pada setiap minggu untuk tempoh 4 minggu. Rasa bersyukur peringkat *tret* dan *state* serta kesejahteraan subjektif semua peserta diukur sebelum dan selepas intervensi. Kajian susulan dijalankan 3 minggu setelah kajian utama, tetapi hanya untuk kumpulan eksperimental. Keputusan kajian menunjukkan bahawa: 1) senarai rasa bersyukur meningkatkan perasaan bersyukur dan kesejahteraan subjektif ibu-ibu yang menyertai kajian ini; (2) terdapat korelasi positif antara rasa bersyukur peringkat *tret* dengan kesejahteraan subjektif; (3) terdapat korelasi positif antara rasa bersyukur peringkat *state* dengan kesejahteraan subjektif; (4) terdapat korelasi positif antara rasa bersyukur peringkat *tret* dengan rasa bersyukur peringkat *state*; dan (5) kesan sementara intervensi berkekalan berdasarkan keputusan ukuran susulan.

Keputusan kajian menunjukkan keberkesanan senarai rasa bersyukur boleh dikembangkan kepada kumpulan terancam atau lebih spesifik lagi ibu dengan anak yang ada sindrom Down. Implikasi praktikal termasuk: (1) memberikan alternatif kepada ibu yang sedang bergelut dengan tekanan psikologi and kesejahteraan subjektif yang rendah disebabkan oleh tugas membesarkan anak dengan keperluan khas; (2) menggalakkan penggunaan intervensi berasaskan rasa syukur untuk mengeratkan hubungan kekeluargaan; dan (3) meningkatkan lebih banyak minat dan aplikasi penyelidikan bidang psikologi positif untuk membantu membina komuniti yang lebih baik dan lebih sihat.

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ABSTRACT

The field of positive psychology is quickly emerging with a number of interventions that focus on increasing the happiness and well-being of people. Gratitude-based interventions have been found to be one of the effective interventions in many studies. This online-based study investigated the effectiveness of a 4-week intervention using gratitude lists to improve the level of gratitude and subjective well-being (SWB) in a sample of Malaysian mothers with Down syndrome children (N = 63). The participants were divided into a control and an experimental group. The experimental group underwent a gratitude-based intervention in which participants reported things they were grateful for every week for a period of 4 weeks. All participants had their trait gratitude, state gratitude and SWB measured before and after the intervention. A follow up test was conducted after 3-weeks but only on the experimental group. The results revealed that : (1) gratitude lists significantly increased feelings of gratitude and enhanced SWB in the participating mothers; (2) there is a positive correlation between trait gratitude and SWB; (3) there is a positive correlation between state gratitude and SWB; (4) there is a positive correlation between trait gratitude and state gratitude ; and (5) the short term effects of the intervention have persisted based on the results of the follow-up measurement. The results imply that the efficacy of gratitude lists extends more broadly to vulnerable groups, specifically to mothers with Down syndrome children. The practical implications include (1) alternative methods for mothers in dealing with parenting stress and low subjective well-being associated with raising a child

with special needs; (2) potential adoption of gratitude-based interventions that can improve familial relationships; and (3) increasing greater interest and application of positive psychology research to help build a better and healthier community.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The field of positive psychology focuses on making people's lives more productive and fulfilling, and identifying and nurturing talent (Magyar-Moe, 2009). Positive psychology functions as a complement to traditional psychology. Conventional psychology mainly focuses on alleviating misery and human suffering, often associated with a mental illness (Seligman, 2012). Peterson and Seligman (2004) developed the "Values in Action (VIA) Classification Character Strengths" to identify a set of core virtues and character strengths that enable people to lead more fulfilling lives. In addition, positive psychology proposes that these human strengths can protect against mental disorders and increase psychological well-being (Seligman & Csikszentmihalyi, 2000). The character strength of "gratitude" is classified under the virtue of transcendence. In the case of gratitude, these positive outcomes can be attributed to the "healing effect" that gratitude elicits when an individual feels recognized, affirmed and strengthened to do what was once too frightening to do before; and becomes aware of the aspects of emotional experience that were previously feared or blocked from awareness (Emmons & Stern, 2013). In other words, gratitude triggers the individual to feel emotions that have transformational outcomes that bring closure to old wounds and alleviates emotional suffering.

A psychological intervention in general terms is understood as a mental health nursing intervention that is underpinned by psychological methods and theory. It is intended to improve biopsychosocial functioning and it is usually delivered via a

therapeutically structured relationship (Smith, 2012). These interventions can be used to treat mental disorders or to promote good mental health. “Positive Psychological Interventions” refer to a general category of actions performed in order to increase gratitude in individuals therapeutically which in turn improves their subjective well-being (SWB). Gratitude-based interventions are a subset of Positive Psychological Interventions. The majority of these gratitude-based interventions can be grouped into three main categories, which are behavioural expressions of gratitude, grateful contemplation, and gratitude listings (Wood, Froh, & Geraghty, 2010). Incorporating gratitude into positive psychological intervention, a gratitude list typically involves making written lists of life events or things for which one is grateful in regular intervals over a period of a study. Emmons and McCullough (2003) were the first to publish their findings indicating gratitude lists are effective intervention for subjective well-being enhancement.

Mothers with Down syndrome Children have been identified as a group of individuals within society who may greatly benefit from gratitude-based interventions. Many children with Down syndrome and their families experience social stigma from friends, relatives, and their community (Van Riper, Pridham & Ryff, 1992). Raising children with Down syndrome does not always lead to negative consequences for the parents, especially the mother (Scott, Atkinson, Minton, & Bowman, 1997; Van Riper, Ryff & Pridham, 1992). Research has shown that 70% of families were able to adapt and lead ordinary lives (Buckley, 2002). However, the remaining 30% were still vulnerable and may experience considerable stress. Sources of stress for these families can be related to the fact that many children with Down syndrome and their families experience social stigma from friends, relatives, and their community (Van Riper, Pridham, & Ryff, 1992). Moreover, mothers of a child

with Down syndrome have to deal with an ongoing, chronic situation in supporting their child's various needs throughout their life (Chou *et al.*, 2009). Having a child with an unexpected diagnosis, for example Down syndrome, was reported as emotionally overwhelming and stressful for some families (Gatford, 2001; Glidden & Schoolcraft, 2003; Hedov, Anneren & Wikblad, 2009; Lam & Mackenzie, 2002).

This research aims to study the efficacy of a gratitude based intervention i.e. Gratitude list, among mothers with Down syndrome children. More specifically, this study assessed the effectiveness of the intervention in increasing level of gratitude and well-being among the participants. The participants were recruited from Facebook where Down syndrome parent support groups based in Malaysia were targeted as a source of participants. The study presented in this thesis is a 4-week study with a control group and an experimental group. The study was conducted entirely online. There was a 3-week follow-up that was limited to the experimental group to evaluate the short-term effects of the intervention on the participants. The experimental group's follow-up duration of 3 weeks was decided based on what was done in notable past studies and the required response rate to ensure an adequate number of statistical data points to draw a meaningful conclusion. Previous studies as recent as 2016 indicate that the follow-up period can vary from as short as 3 weeks to as long as 6 months (Froh and Emmons, 2008; Seligman *et al.*, 2005; Southwell and Gould, 2016). However, as the sample size for the study is relatively small, the need to minimize the attrition in the experimental group's response rate means that a short-term follow-up was chosen instead of a longer-term follow-up.

This research aims to provide some insight into whether gratitude interventions may play a role in improving the lives of the mothers who remain in this vulnerable group of people as well as improving the lives of those who are

already coping well with their family situation. Ultimately, the goal of the study is to determine if there is an improvement in overall life satisfaction and happiness of the participants, which is measured by subjective well-being. In addition, this study also discussed the relationships between gratitude intervention and subjective well-being (SWB) of mothers raising Down syndrome children.

1.2 Problem Statements

The incidence of Down syndrome is influenced by maternal age and differs between populations around the world - 1 in 319 and 1 in 1000 live births (Wiseman *et al.*, 2009). In Malaysia, it has been reported that Down syndrome affects 1 in 959 live births (Hoe, Boo & Clyde, 1989). Since Malaysia has a population of roughly thirty million, this means that there are potentially thirty thousand infants born to families with this disability in Malaysia alone. These parents face many challenges that normal families do not typically deal with such as: (1) Social stigma and isolation (2) Emotional and financial stress. The stress and challenges will have significant impacts on these families, especially if they do not receive adequate support.

Firstly, many children with Down syndrome and their families experience social stigma and isolation from friends, relatives, and their community (Van Riper, Pridham, & Ryff, 1992). The social stigma arises from society that is not used to the idea of raising children with special needs. The isolation may stem from the mothers who are slowly distancing themselves from their friends who move on to different phases of child upbringing where the child becomes more independent. This has profound implications because caring for children with Down syndrome puts the “normal family cycle” out of order because families do not experience the phase

when their children are able to act more independently as they age. Children with Down syndrome will always be more dependent on their parents, no matter at what age. This is in comparison to children with normal condition.

This phenomenon places a restriction on parental life outside of childcare. A decrease in social contacts with friends who do not have to care for disabled children socially isolates some vulnerable mothers who now have to depend mostly on the family for social interaction as the child ages. Crucially, mothers who report poor family relationships and difficult child temperament were more likely to report higher levels of stress (Cunningham, 1996). Cunningham (1996) suggested to employ the use of interventions aimed at improving mother-child relationships. This begs the question of whether gratitude based interventions can fill this role.

Secondly, in terms of the emotional and financial challenges, mothers of a child with the diagnosis of Down syndrome were reported to be dealing with an ongoing, chronic situation in supporting their child's various needs throughout their life (Chou *et al.*, 2009). Having a child with an unexpected diagnosis was reported as emotionally overwhelming and stressful for some families (Gatford, 2001; Glidden & Schoolcraft, 2003; Hedov, Anneren & Wikblad, 2009; Lam & Mackenzie, 2002). In addition to the initial prognosis of Down syndrome, the child is likely to face significantly increased risk of health issues later on in life such as Alzheimer's disease, which potentially drains the family emotionally, and financially (Wiseman *et al.*, 2009).

There is also a common trend where mothers who are caring for children with disabilities to be less likely to be in employment presumably due to the care needs of the child which puts all the financial burden on the father (Cunningham, 1996). In

cases where a divorce happens, the mother may be forced to take both caregiver and breadwinner responsibilities. Parents also have to live with the fact that Down syndrome children face a much higher risk of developing certain diseases such as Alzheimer's and also face the prospect of a spending a lifetime in order to care for the disabled child which may negatively impact their SWB (Wiseman *et al.*, 2009). In addition to this, since the average life expectancy of someone with Down syndrome is 55 years, it is a potentially life long circumstance that mothers have to face (Wiseman *et al.*, 2009).

Research into whether gratitude interventions are effective in improving the subjective well-being (SWB) of parents, especially mothers, who are raising children with disabilities, has been lacking. Gratitude interventions are simple exercises that have been shown to increase gratitude in individuals, which often leads to improved well-being (Wood, Froh, & Geraghty, 2010). There are studies which look into how average happiness among mothers may differ according to the type of disability a child faces (Abbeduto, 2004). However, studies that explicitly use gratitude interventions as the mechanism to address poor SWB among mothers of these children were only beginning to emerge (Tofangchi *et al.*, 2013; Timmons, 2015). Furthermore, studies that deal exclusively with populations of parents, especially mothers who are raising Down syndrome children, were very limited at best.

In summary, although this group of people face more challenges than ordinary people, there has been little done within the field of positive psychology to address this issue that directly affects their happiness and life satisfaction. Despite gratitude interventions having been proven to be effective in improving overall mood, SWB and life satisfaction in various independent studies (Wood, Froh, & Geraghty, 2010), studies which address the question of the effectiveness of gratitude

based interventions in populations of mothers with Down syndrome children is still lacking in Malaysia. Elsewhere, there have been recent studies that are beginning to emerge that investigated the use of gratitude interventions to address the issue of poor SWB among mothers of children with disabilities but no studies so far have focused specifically on mothers with Down syndrome children (Tofangchi *et al.*, 2013; Timmons, 2015). Similar patterns can be observed for other studies related to Down syndrome children. For example, latest data on the number of babies who have been born with Down syndrome in Malaysia is outdated as the last detailed census was done back in 1989. The study estimated the incidence of Down syndrome in Malaysia at 1 in 959 live births (Hoe, Boo & Clyde, 1989). There have also been efforts to identify predictors of parenting stress among groups of mothers (n=147) with Down syndrome children (Norizan & Shamsuddin, 2010). The study noted that parenting stress was significantly negatively correlated with frequent use of acceptance of the child's behaviour, religious and optimist coping styles. One weakness to take note of is that Norizan and Shamsuddin (2010) only focused on mothers with children who were under 12 years old and did not consider cases where the children have progressed into their teens or adulthood despite the fact that Down syndrome children are unlikely to become independent even as they enter adulthood. Therefore, current studies on mothers with Down syndrome children in Malaysia have identified correlations between parenting stress, which may be an indicator of SWB, and several other factors. The question of whether gratitude-based interventions can also play a role as a coping strategy for parents to increase SWB has not been discussed.

1.3 Research Objectives

The above background leads to the following research objectives. This study mainly aims to:

1. Examine the subjective well-being (SWB) of mothers with children who are raising children with Down syndrome.
2. Assess the level of gratitude of mothers who are raising children with Down syndrome.
3. Investigate the effectiveness of a gratitude-based intervention that employs the use of gratitude lists to improve the level of gratitude and SWB of mothers who are raising children with Down syndrome.
4. Investigate the relationship between trait gratitude and SWB of mothers who are raising children with Down syndrome.
5. Investigate the relationship between state gratitude and SWB of mothers who are raising children with Down syndrome.
6. Investigate the relationship between trait gratitude and state gratitude of mothers who are raising children with Down syndrome.

1.4 Research Questions

Based on the purpose of the study, these are the research questions pertaining to this study:

1. What is the level of subjective well-being (SWB) of mothers who are raising children with Down syndrome?

2. What is the level of gratitude of mothers who are raising children with Down syndrome?
3. How a gratitude-based intervention, which employs the use of gratitude lists, can improve the level of gratitude and subjective well-being of mothers who are raising children with Down syndrome?
4. What is the relationship between trait gratitude and SWB of mothers who are raising children with Down syndrome ?
5. What is the relationship between state gratitude and SWB of mothers who are raising children with Down syndrome ?
6. What is the relationship between trait gratitude and state gratitude of mothers who are raising children with Down syndrome ?

1.5 Significance of the Study

This study is significant in a number of ways. Firstly, the study provides a potential way for mothers with Down syndrome children to cope with social stigma and isolation that they face in their daily lives. Earlier, social stigma and isolation have been identified as challenges for these mothers. Given that Down syndrome affects at least one in 1000 live births, it can be inferred that thousands of families face these everyday challenges in Malaysia alone (Wiseman *et al.*, 2009). Faced with these facts, there is little doubt that research on this group of individuals will have a significantly positive impact on society by directly addressing the hardships faced by these mothers. For example, gratitude lists have the potential to improve mother-child relationships to decrease the possibility of family tensions or divorce. It can also trigger improved relationships within the mother's social circle by cultivating

positive emotions towards friends because of kindness received in the past. This eases feelings of social isolation and improves social bonds.

Secondly, the study provides evidence to address whether gratitude interventions are able to alleviate the stresses related to the emotional and financial challenges faced by mothers with Down syndrome children. The idea is that improving the subjective well-being of the mothers reduces the psychological stresses they face. The study sheds some light on the potential effectiveness of using a gratitude list in a positive psychology intervention setting to improve the subjective well-being of mothers with Down syndrome children. Typical studies on gratitude interventions do focus on adult populations but they tend to pick from a specific subset of the community such as college students or by using websites to gather large amounts of participants without any filtering (Seligman, 2005; Emmons & McCullough, 2003). Recent literature suggests that older adults also benefited from the use of gratitude lists in a 2-week study and recommends gratitude lists as a cost-effective method for improving wellbeing for older adults (Killen and Macaskill, 2015). Given the success of similar gratitude lists with adult populations of different age groups so far, it is entirely possible such benefits can be realized for the adult population in this study.

Finally, this research contributes to the growing the tree of knowledge in this specific area of academic study. As mentioned before in the problem statement, research regarding the use of gratitude to improve the SWB of mothers raising children with mental disabilities is lacking. For example, even though it has been reported that the SWB of mothers can vary greatly with the type of mental disability the child has (Abbeduto, 2004), there has been little attempt to measure SWB of mothers who are raising Down syndrome children in the context of a gratitude-based

intervention. This study provides valuable data for positive psychology researchers regarding the level of gratitude and SWB among mothers raising Down syndrome children as well as insight into how gratitude and SWB are related to each other in the context of the study population. In turn, it lays the foundation for greater acceptance of gratitude lists as a viable method for improving the SWB of mothers who are raising Down syndrome children especially those who are struggling to cope with their situation.

1.6 Definitions of Key Terms

Positive psychology is a complement to traditional psychology. It is a field of psychology which mainly focuses on making people's lives more productive and fulfilling and identifying and nurturing talent in individuals (Magyar-Moe,2009).

Subjective Well-being (SWB) is a relative measure of a person's happiness according to four distinct factors: life satisfaction (overall judgments of one's life), satisfaction with important domains (family life, work satisfaction), the amount and frequency of positive affect experienced (experiencing many pleasant emotions and moods), and the amount and frequency of negative affect experienced (experiencing few unpleasant emotions and moods) (Diener,2000).

Down syndrome is the most prevalent cause of intellectual impairment associated with a genetic anomaly, in this case, trisomy of chromosome 21. It affects both physical and cognitive development and produces a characteristic phenotype, although affected individuals vary considerably with respect to severity of specific impairments (Silverman,2007).

Gratitude is an emotion which arises from the recognition and appreciation of other individuals or things by the beneficiary of acts of kindness or fortunate

outcomes (McCullough, Kilpatrick, Emmons, & Larson, 2001; Emmons & McCullough, 2003; Peterson & Seligman, 2003).

State gratitude is “the feeling of thankful appreciation for favours received” (Watkins *et al.*, 2003).

Trait gratitude the predisposition of an individual to experience the state of gratitude (Watkins *et al.*, 2003).

Gratitude intervention is a general category of actions performed in order to increase gratitude in individuals therapeutically, which in turn improves their SWB (Wood, Froh, & Geraghty, 2010).

Gratitude list is a type of gratitude intervention, which involves making written lists of life events or things for which one is grateful in regular intervals over a period of time. This is also known as a “gratitude journal” (Wood, Froh, & Geraghty, 2010).

Gratitude letter is a form of gratitude intervention that requires writing a letter of gratitude to a person who they have yet to properly thank for received kindness in the past and then deliver it in person. A gratitude letter is also referred to as a “gratitude visit”. (Wood, Froh, & Geraghty, 2010).

Grateful contemplation is a simple gratitude intervention where participants to either think or write about the things that they are grateful for in an ad hoc setting (Wood, Froh, & Geraghty, 2010).

1.7 Summary

Chapter 1 is a brief introduction to the overall study. It presents the readers a brief background of the study and the research questions this study addresses. Furthermore, a clear direction to conduct the research was presented through an overview of the study methodology. Next, the following chapter goes into deeper discussion of relevant literature reviews, theoretical discussions regarding the concept of gratitude, subjective well-being and the efficacy of gratitude interventions according to previous studies. Subsequently, it develops a conceptual framework of the study based on the literature review to illustrate the study protocol.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Firstly, this chapter introduces readers to the history and goals of positive psychology for readers to get an early intuition regarding the motivations of this study. Next, the readers are introduced to positive psychological interventions to see how psychological interventions can be useful in improving the well-being of individuals, which is related to this study since gratitude interventions are a subset of positive psychological interventions.

Then, an introduction to the origins of gratitude and how this particular study conceptualizes gratitude is discussed. Next section discusses the state gratitude and trait gratitude. This gives a clearer definition of how gratitude is conceptualised in this study and broader information regarding the different types of gratitude. Subsequently, various methods to measure gratitude and various types of gratitude interventions were discussed. The discussion regarding the methods to measure gratitude and various types of gratitude interventions aimed to shed light on the reasoning behind the research design choices in terms of which measurement scale or gratitude intervention is more appropriate.

Thirdly, readers are briefly introduced to how the concept of subjective well-being, especially in terms of how it is conceptualized and measured in this study. This section outlines how the researcher proposes to define subjective well-being and the appropriate measurement scale to match the definition. Next, an explanation on the mechanisms that bind gratitude and subjective well-being to each other is presented. This illustrates how a gratitude intervention can potentially influence a person's subjective well-being.

Lastly, a conceptual framework of the study based on the literature review is proposed. In addition, a number of research hypotheses that can be tested to assist in answering the research questions put forward in Chapter 1.4 is presented.

2.2 Introduction to Positive Psychology

Positive psychology is the scientific study of optimal human functioning, the goals of which are to better understand and apply those factors that help individuals and communities thrive and flourish (Magyar-Moe et al, 2015).

Psychology during the era before World War II had 3 distinct objectives: To cure mental illness, to make the lives of people more fulfilling and productive and to nurture the talents of gifted individuals (Seligman & Csikszentmihalyi, 2000). Unfortunately, the aftermath of World War II saw an outpouring of demand for treatments for mental illnesses which was on the rise due to the toll that the traumatic events during the war took on military personnel (Seligman & Csikszentmihalyi, 2000). Understandably, there was a marked increase in funding for psychological research that focused on pathology which enabled huge strides in the understanding and treatment of a number of mental illnesses but it also resulted in neglect of two other important facets of psychology.

In 1998, Martin Seligman urged psychologists to return to their roots in his presidential speech to the American Psychological Association, and not only focus on curing mental illness but also spend more effort on making people's lives more productive and fulfilling and identifying and nurturing talent (Magyar-Moe,2009). This drove a group of scholars to abandon the persistent focus on pathology in psychology and to shift their focus to a more balanced viewpoint. This meant that positive emotions, positive traits, strengths, talents and positive institutions were given greater weight in terms of how much research manpower were expended in

these fields (Seligman, 2002). This new wave of research delved into a field of what is commonly known today as “positive psychology”. Positive psychology functions as a complement to traditional psychology which mainly focuses on alleviating misery and human suffering which is often associated with a mental illness (Seligman, 2012). According to Seligman (2012), positive psychology concerns itself with the study of positive emotions to help make the lives of people more fulfilling because by and large people are more concerned with building a better framework to lead better lives, for example, to have better relationships, to have more meaning in life, to have more engagement, and to include more positive emotions in their lives.

Following the return of focus to the study of positive emotion, Peterson and Seligman (2004) developed the “Values in Action (VIA) Classification Character Strengths” to identify a set of core virtues and character strengths that enable people to lead more fulfilling lives. These character strengths are found in each individual. Each of the 6 virtues, including humanity, justice, temperance, transcendence, and wisdom, is associated with numerous character strengths. The virtue of humanity refers to the character traits in people, which encourage them to care for others and build friendships. The virtue of justice refers to the character strengths in individuals that contribute to maintaining a healthy and stable community. The virtue of temperance refers to the character strengths, which protect against human excessiveness such as greed and arrogance. The virtue of wisdom refers to the character traits in individuals, which lead to the acquisition and application of knowledge.

The character strength of “gratitude” which is the focus of this study is classified under the virtue of transcendence along with: (1) Appreciation of beauty and excellence (2) Hope (3) Humour and (4) Religiousness. Virtues placed under this

category share similarity with each other in terms of providing meaning to life, forging bonds with others and connecting individuals to the larger universe. In addition, positive psychology proposes that human strengths can protect against mental disorders and increase psychological well-being (Seligman & Csikszentmihalyi, 2000). Thus, positive psychology aims to “develop interventions that build the enabling conditions of life, not just interventions that decrease misery” (Seligman, 2012).

In relation to this study, gratitude was identified as a potential tool to improve the quality of life and alleviate suffering among mothers with Down syndrome children. In line with the goals of positive psychology to make the lives of people more fulfilling, this study aims to investigate whether there is a way to utilize the positive effects of gratitude in order to improve the well-being of a particular group of individuals in Malaysian society.

2.2.1 Positive Psychology Interventions

The method in which positive psychology assist humans to attain fulfilment in life is referred to as Positive Psychology Interventions (PPIs). PPIs are defined in the literature as intentional activities or treatment methods, designed in order to enhance positive feelings, cognitions, or behaviours (Sin & Lyubomirsky, 2009). The strategies employed by PPIs to increase well-being are diverse: writing gratitude letters, practicing optimistic thinking, replaying positive experiences, and socializing (Magyar-Moe, 2009). PPIs are often used in tandem with traditional psychological interventions such as psychotherapy that are usually focused on healing mental illnesses whereas PPI focus on enhancing positive emotions in daily life (Magyar-Moe, 2009).

PPI's attempt to engage the "intentional activities" aspect within the Model of Sustainable Happiness (Lyubomirsky, Sheldon, & Schkade, 2005). Intentional activities are discrete actions or practices in which people can choose to engage. For example, choosing to exercise regularly is a type of intentional activity. According to the model, an individual's happiness level is determined by three factors with an individual weighting of 50%, 10% and 40% respectively: (1) the set point (2) life circumstances (3) intentional activities. The model theorised that the "set point", the central or expected value within the person's set range, is genetically determined and is assumed to be fixed, stable over time, and immune to influence or control. Circumstantial life factors also include the individual's personal history, which covers life events that have an impact on happiness, such as having experienced a childhood trauma or being appreciated in a significant way. Since it is difficult to change one's life circumstances or set point, changing individual's intentional activities through PPIs for example offers the potential for the most increases in sustained happiness and enhanced SWB according to this model. With specific regard to the focus of this study, practising positive psychological virtues and character strengths, such as gratitude has been found to enhance subjective well-being (SWB) (Emmons & McCullough, 2003).

Despite the potential that these PPIs hold, studies examining the efficacy of PPIs on an individual's SWB have shown mixed results. A meta-analysis of 51 studies on the efficacy of PPIs revealed that PPIs are effective at both increasing SWB and decreasing depressive symptoms (Sin & Lyubomirsky, 2009). The r effect sizes for SWB (mean $r = .29$) and depression (mean $r = .31$) are moderate and is evidence to indicate that PPIs work well. On the other hand, there are some studies which reported that practising PPIs present no overall benefits when compared to

control groups (Sin, Della Porta & Lyubomirsky, 2011; Sheldon & Lyubomirsky, 2006). A study by Sin, Della Porta, and Lyubomirsky (2009) showed that writing gratitude letters once a week for a period of eight weeks did not consistently produce increases in SWB for all subjects in the study population. Interestingly, those who were motivated to become happier reported improved SWB. Sheldon and Lyubomirsky (2006) reported that among three groups: (1) a group visualizing best-possible-selves (BPS) (2) counting one's blessings (3) a control exercise, only the BPS group reported a significant positive effect from the exercise. Therefore, more research needs to be done to further investigate the efficacy of the various types of PPIs that have been developed and understand the factors that determines their influence on SWB measures or other positive outcomes measures. This work is aimed to do exactly this with gratitude based PPIs focusing on a specific population, i.e. mothers who are raising children with Down syndrome.

Furthermore, there has been new evidence to suggest that these interventions can be helpful and increase well-being in the short term but individuals eventually experience natural adaptation and a decrease in positive affect over time (Bao & Lyubomirsky, 2014). To extend the length of time well-being is experienced and prevent this natural adaption, Bao and Lyubomirsky (2014) recommended that individuals increase the number and variety of positive events and emotions experienced by engaging in positive activities or by making these activities social. In addition, aspirations for the level of well-being experienced should be maintained at a reasonable level. Finally, individuals were encouraged to engage in activities that elicit appreciation for positive things in one's life (Bao & Lyubomirsky, 2014).

In conclusion, several considerations need to be reviewed when designing a positive psychological intervention in order to boost the likelihood of success. This is

because not all psychological interventions produce the intended outcomes. As stated before, this study employs the use of gratitude interventions. In order to do this, past studies of gratitude interventions need to be evaluated in order to make an informed choice regarding which gratitude intervention is more likely to demonstrate significant positive affect or significant improvements in subjective well-being and gratitude with an adult population. Next, there needs to be research done regarding how participants' gratitude and subjective well-being changed during the post-intervention phase. This is mostly due to the recent concerns raised regarding the long-term "natural adaption" phenomenon seen in a recent study (Bao & Lyubomirsky, 2014).

2.3 Introduction to Gratitude

Gratitude does not lend itself easily to classification since it is often depicted in the literature as an attitude, an emotion, a moral virtue, a habit, a motive and a personality trait (Emmons 2007). Gratitude as it is known today is defined by the Oxford English Dictionary as "the quality of being thankful; readiness to show appreciation for and to return kindness".

The word itself is derived from Latin origins. The root words are *gratia* and *gratus* which means "favour" and "pleasing" respectively and all words derived from the word *gratia* are associated with ,kindness, generousness, gifts, the beauty of giving and receiving, or getting something for nothing (Emmons 2007).

Since the days of the Roman Empire, gratitude has been described as a highly prized human virtue. Cicero, widely regarded as one of ancient Rome's greatest orators and prose stylists described gratitude as "not only the greatest of virtues, but the parent of all the others. Conversely, Seneca the Younger, a Roman philosopher, describes ingratitude as an "abomination" (McCullough, Kilpatrick, Emmons, &